MATI-218US

Appln. No.: 10/524,965
Amendment Dated August 28, 2006
Reply to Office Action of June 13, 2006

Remarks/Arguments:

Claims 1-20 are pending and stand rejected. By this amendment claims 1, 2, 10, 13, 16

and 18 are amended and new claim 21 is added.

No new matter is presented by the claim amendments and new claim. Support for the

claim amendments and new claim can be found through out the original specification and, more

particularly, in the original specification at paragraphs [0017]-[0021], [0028], and [0044]-

[0046].

Objections to the Specification

In the Office Action, at item 1, the application was objected to under 37 C.F.R. 1.72(b),

for not including an abstract. Contrary to the assertion in the Office Action, the application, as

filed did include an abstract. The abstract may be found on the cover page of the PCT

Application. Thus, the abstract is "on a separate sheet" as required by 37 C.F.R. § 1.72(b).

See MPEP §§608.01(b)(c) and §1893.03(e)(1). Nonetheless, to speed prosecution of the

application, applicants provide a "new" abstract in this amendment.

Reconsideration is respectfully requested.

Rejection of Claims 1, 2, 7, 10, 13, and 18 under 35 U.S.C §102(b)

In the Office Action, at item 3, claims 1, 2, 7, 10, 13, and 18 are rejected under 35

U.S.C. §102(b) as being anticipated by Tyan et al. (U.S. Patent No. 5,893,127) (hereafter

referred to as Tyan).

Claim 1

Claim 1 is directed to a method for generating structured document files from a

document image, and recites: "selecting a model file of a plurality of modeled files, each of the

Page 9 of 16

Appln. No.: 10/524,965
Amendment Dated August 28, 2006
Reply to Office Action of June 13, 2006

modeled files representing a type of document image, and including a schema for comparison

with each of the one or more zones of the document image."

Tyan Reference

Tyan discloses the generation of HTML files using block segmentation. Each block is

further analyzed to determine a block type. Tyan is silent regarding the use of model files

which represent a respective type of document image. Tyan is also silent regarding the

selection of a model file. More particularly, Tyan discloses that after a bitmap image is obtained

it is segmented into blocks. The location of each block is determined and a layout analysis is

performed to identify layout relationships among the blocks based on their relative locations.

(See Tyan at col. 4, lines 35-41.) In the Tyan document generator, a type of block is

determined "by successfully performing a series of tests and either designating the block type

when a test is first passed ... or designating the default block type in the event that none of the

tests are passed." (See Tyan at col. 10, lines 33-39.) Thus, Tyan reduces restructured

marked-up language documents based on a set of rules established on a block-by-block

analysis.

Accordingly, it is submitted that claim 1 patentably distinguishes over Tyan for at least

the above-mentioned reasons, and is submitted to be allowable.

Claims 10, 13 and 18

Claims 10, 13, and 18, although not identical to claim 1, include patentably

distinguishing features similar to those of claim 1, and, accordingly, are submitted to patentably

distinguish over Tyan for similar reasons to those of claim 1.

Appln. No.: 10/524,965
Amendment Dated August 28, 2006
Reply to Office Action of June 13, 2006

Claims 2 and 7

Claims 2 and 7, which include all the limitations of claim 18 from which they ultimately depend, are also submitted to patentably distinguish over Tyan for at least the same reasons as claim 1.

Rejections of Claims 3-6, 11, 12, 14, 15, 19, and 20 under 35 U.S.C. §103(a)

In the Office Action, at item 5, claims 3-6, 11-12, 14-15 and 19-20 are rejected under 35 U.S.C. §103(a) as being obvious over Tyan in view of Yamashita et al. (U.S. Patent No. 5,555,362) (hereafter referred to as Yamashita).

Reconsideration is respectfully requested.

Claims 3-6, 11-12, 14-15, and 19-20, which include all the limitations of claim 1, claim 10, claim 13 or claim 18 from which they ultimately depend, are submitted to patentably distinguish over Tyan for at least the same reasons as their respective base claims.

Yamashita Reference

Yamashita does not overcome the deficiencies of Tyan. This is because, Yamashita does not disclose or suggest the selection of a model file from a plurality of model files, as required by claim 1. More particularly, Yamashita discloses a layout model 80 which schematically represents the tree structure 61 of the document image 51. In Yamashita, the layout model 80 is automatically generated based on the document image. (See Yamashita at col. 5, lines 43-48 and col. 5, line 66 to col. 6, line 6.) That is, Yamashita teaches away from the selection of a model layout because each model layout is generated automatically. In particular, in Yamashita, each model is not selected from a plurality of existing model layouts. Instead, the document image is analyzed to automatically separate objects of the document and the document image is segmented into tree structure areas. The area segmentation of the tree structure is displayed on the display unit and a user interactively execute corrections to define a

MATI-218US

Appln. No.: 10/524,965
Amendment Dated August 28, 2006
Reply to Office Action of June 13, 2006

desired tree structure. (See Tyan at col. 1, line 62 to col. 2, line 2.) Thus, Yamashita does not

disclose or suggest anything related to the selection of a model file.

The cited art of Tyan and Yamashita, taken separately or in any proper combination,

does not disclose or suggest at least the recitation of "selecting a model file of a plurality of

model files," (as recited in claims 1, 10, 13, and 18.)

Accordingly claims 3-6, 11-12, 14-15 and 19-20 are submitted to patentably distinguish

over the combination of Tyan and Yamashita for at least the same reasons as those as claims 1,

10, 13, and 18, and are submitted to be allowable.

Rejection of Claim 8 under 35 U.S.C. §103(a)

In the Office Action, at item 6, claim 8 is rejected under 35 U.S.C. §103(a) as being

obvious over Tyan in view of Nasr et al. (U.S. Patent No. 6,263,332) (hereafter referred to as

Nasr).

Reconsideration is respectfully requested.

Claim 8, which include all the limitations of claim 1 from which it depends, is submitted

to patentably distinguish over Tyan for at least the same reasons as claim 1.

Nasr Reference

Nasr does not overcome the deficiencies of Tyan. This is because, Nasr does not disclose

or suggest the selection of a model file from a plurality of model files and therefore that each of

the model files represents a respective type of document image. Nasr, which is used by the

Examiner to show that structured document files include XML files and XSL files, discloses a

transformative process being used such that a server enables an appropriate XSL specification

given the available browser information. That is, selection of the XSL transformation

specification is based on the type of browser available. Nasr discloses that a "transformative

Page 12 of 16

MATI-218US

Appln. No.: 10/524,965
Amendment Dated August 28, 2006
Reply to Office Action of June 13, 2006

sequence [i.e., the result of the selected transformative process] ... access[es] a set of XSL transformative rules" to establish a display for the XML information into the necessary format. (Brackets added; see Nasr at col. 12, lines 33-40). Thus, Nasr teaches how to use structured documents for parsing and for interrelating elements within the structured document for compatibility with various browsers. (See Nasr at col. 8, line 67 to col. 9, line 14 and col. 11, lines 16-31). Nasr is silent, however, regarding use of model files and accordingly, that such files represent respective document types.

The cited art of Tyan and Nasr, taken separately or in any proper combination, does not disclose or suggest the above-mention recitation of claim 1.

Accordingly, claim 8 is submitted to patentably distinguish over the combination of Tyan and Nasr for at least the same reasons as those as claim 1, and is submitted to be allowable.

Rejection of Claims 9, 16 and 17 under 35 U.S.C. §103(a)

In the Office Action, at item 7, claims 9, 16 and 17 are rejected under 35 U.S.C. §103(a) as being obvious over Tyan in view of Barrett (U.S. Patent No. 5,442,746).

Reconsideration is respectfully requested.

Claim 16, although not identical to claim 1, includes patentably distinguishing features similar to those of claim 1, and, accordingly, is submitted to patentably distinguish over Tyan for similar reasons to those of claim 1.

Claims 9 and 17, which include all the limitations of claim 1 or claim 16 from which they depend, are submitted to patentably distinguish over Tyan for at least the same reasons as claim 1 or claim 16.

Appln. No.: 10/524,965
Amendment Dated August 28, 2006
Reply to Office Action of June 13, 2006

Barrett Reference

Barrett does not overcome the deficiencies of Tyan. This is because, Barrett does not disclose or suggest the selection of a model file of a plurality of model files and furthermore that each of the model files represents a respective type of document image. Barrett, which is used by the Examiner to show that workflow icons are updated to represent particular steps (i.e., segmenting, converting, labeling, and automatically associating mark-up tags), is silent regarding any selection of model files.

The cited art of Tyan and Barrett, taken separately or in any proper combination, does not disclose or suggest at least the recitation of "selecting a model file of a plurality of model files," as recited in claims 1 or a similar recitation of "a schema panel for displaying ... a selected model file which is selected from a plurality of model files, each of the model files representing a respective type of document image, and wherein the selected model file includes the schema for comparison with each of the one or more zones of the document image" as recited in claim 16.

Accordingly, claim 16 is submitted to patentably distinguish over Tyan and Barrett for the above-mentioned reasons.

Claims 9 and 17, which include all the limitations of claim 1 or claim 16 from which they depend, are submitted to patentably distinguish over Tyan and Barrett for at least the same reasons as claim 1 or claim 16, and are submitted to be allowable.

New Claim 21

New claim 21, which include all the limitations of claim 1 from which it depends, is submitted to be patentable for at least the same reasons as claim 1.

MATI-218US

Appln. No.: 10/524,965
Amendment Dated August 28, 2006
Reply to Office Action of June 13, 2006

New claim 21 include another patentable distinction beyond that of claim 1; namely "automatically updating the selected model file based on the updated schema," and is submitted to be patentable for this recitation as well.

Entry and consideration is respectfully requested.

Conclusion

In view of the claim amendments, new claim and remarks set forth above, Applicants respectfully submit that claims 1-21 are in condition for allowance and an early notification to that effect is earnestly solicited.

Respectfully submitted,

Kenneth N. Nigon, Reg. No. 31,549
Eric Berkowitz, Reg. No. 44,030
Attorneys for Applicants

KNN/EB/eak/pb

Dated: August 28, 2006

P.O. Box 980
Valley Forge, PA 19482
(610) 407-0700

The Director is hereby authorized to charge or credit Deposit Account No. 18-0350 for any additional fees, or any underpayment or credit for overpayment in connection herewith.

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office (571-273-8300) on the date shown below.

August 28, 2006
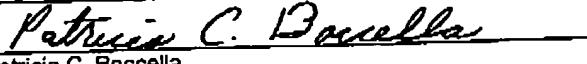
Patricia C. Boccella

Appln. No.: 10/524,965
Amendment Dated August 28, 2006
Reply to Office Action of June 13, 2006

RECEIVED   MATI-218US
CENTRAL FAX CENTER

AUG 2 8 2006

ABSTRACT

A method for generating structured documents files from a document image includes segmenting the document image into one or zones, and converting the respective text images within the one or more zones to digital text. One or more zones includes a respective text image. The method further includes automatically identifying layout information for each of the one or more zones, labeling each of the one or more zones in accordance with a schema, and automatically associating marked up language tags with the labeled zones to generate the structured document files responsive to the identified layout information a model file.